

## CLAIMS

1. Mould for the production of plastic abrasives, of the type used individually or in sets for baking mixtures consisting of thermosetting resins combined with abrasive powders in high-temperature ovens, characterised in that said mould is coated with metal-matrix materials wherein at least one substance with non-stick properties is mixed in micronised form.
- 10 2. Mould for the production of plastic abrasives according to claim 1, characterised in that it is coated with metal-matrix materials wherein micronised teflon is mixed.
- 15 3. Mould for the production of plastic abrasives according to claim 1 or 2, characterised in that said coating is performed with non-galvanic treatments.
- 20 4. Mould for the production of plastic abrasives according to claim 1, characterised in that the body of the mould to be coated is constituted by metal material.
- 25 5. Support for moulds used in the production of plastic abrasives, of the type used for baking mixtures consisting of thermosetting resins combined with abrasive powders in high-temperature ovens, which comprises sets of moulds designed to be driven

and positioned on support guides, characterised in that said moulds are removably secured individually to said support guides.

6. Support for moulds used in the production of  
5 plastic abrasives, according to claim 5,  
characterised in that said support guides are dovetailed and are connected at the ends thereof to transport units associated with said drive chains.

7. Support for moulds used in the production of  
10 plastic abrasives, according to claim 5 or 6,  
characterised in that said moulds for plastic abrasives are attached individually to said guides by means of a thread on the head which engages with a perforated, threaded bar, each of which said rods is  
15 inserted into the corresponding guides.

8. Support for moulds used in the production of plastic abrasives, according to claims 5-7,  
characterised in that said transport units associated with said drive chains are constituted by anchorage  
20 wings to which plates are connected, counterplates being anchored to said plates by anchorage means.

9. Support for moulds used in the production of plastic abrasives, according to claims 5-8,  
characterised in that tapes containing holes for said  
25 moulds are positioned between said moulds and said

guides.

10. Support for moulds used in the production of plastic abrasives, according to claims 5-9, characterised in that said transport guides are 5 protected by heat-resistant, anti-dilation, non-stick materials.

11. Support for moulds used in the production of plastic abrasives, according to claim 10, characterised in that said transport guides are 10 protected by teflon-impregnated fibreglass.

12. Mould according to claim 1, wherein the metal matrix is one or more metals, or alloys thereof, selected from the group consisting of: nickel, copper, chromium, cobalt, manganese, titanium, iron, 15 zinc, aluminium, rhodium, palladium, silver, platinum, gold, vanadium, tungsten, lead and tin.

13. Mould according to claim 12, wherein the metal matrix is nickel.

14. Mould according to claim 1, wherein the substance 20 with non-stick properties is one or more fluoropolymers, or mixtures thereof.

15. Mould according to claim 14, wherein said one or more fluoropolymers, or mixtures thereof, are selected from the group consisting of 25 polytetrafluoroethylene (PTFE), fluorinated ethylene-

propylene resins (FEP), perfluoroalkoxy (PFA), polyvinylidene fluoride (PVDF), ethylene tetrafluoroethylene (ETFE) and ethylene chlorotrifluoroethylene (ECTFE).

5 16. Mould according to claim 15, wherein the fluoropolymer is polytetrafluoroethylene (PTFE).

17. Mould according to claim 1, wherein the mould coating comprises a metal matrix in which at least one substance with non-stick properties, preferably 10 fluoropolymer(s), is mixed in micronised form, in the percentage of 5% to 60% by weight, preferably 25% to 30% by weight, of the total weight of the metal matrix and the substance with non-stick properties.

18. Mould according to claim 1, wherein the mould 15 coating consists of a metal matrix in which at least one substance with non-stick properties, preferably fluoropolymer(s), is mixed in micronised form in the percentage of 5% to 60% by weight, preferably 25% to 30% by weight, the percentage weight of the metal 20 matrix being its complement to 100%.

19. Mould according to claim 1, wherein the substance with non-stick properties in micronised form is mixed in the form of particles with an average size of 0.1  $\mu\text{m}$  to 200  $\mu\text{m}$ , preferably with a size of 0.5  $\mu\text{m}$  to 100 25  $\mu\text{m}$ , and more preferably in the form of particles with

an average size of 1  $\mu\text{m}$ .

20. Mould according to claim 1, wherein the mould is coated with materials consisting of a nickel metal matrix in which, as a substance with non-stick properties in micronised form, polytetrafluoroethylene (PTFE) is mixed in the percentage of 25% to 30% by weight, the percentage by weight of the metal matrix being its complement to 100%, and said PTFE in micronised form consisting of particles with an average size of 1  $\mu\text{m}$ .

21. Process for manufacturing plastic abrasive by baking a mixture comprising at least a thermosetting resin combined with an heat initiators or catalyst and an abrasive powder or filler, wherein said mixture is contained in a mould according to claim 1.